

In re Application of Ragsdale et al.  
Application No. 10/615,283

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**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) An additive suitable for addition to a polyol reactant used in the manufacture of a polymer foam, the additive comprising:
  - (a) a polyol,
  - (b) about 0.8 to about 2.0 php of a benzotriazole, the benzotriazole being present in the additive in an amount of about 0.5 to about 6.0 parts per hundred parts of the polyol (php),  
[(b)] (c) about 0.1 to about 0.7 php of a lactone-based antioxidant having a 3-phenylbenzofuran-2-one structure, the lactone-based antioxidant being present in the additive in an amount of about 0.05 to about 1.0 php, and  
[(c)] (d) a third component selected from the group consisting of:
    - (i) about 0.05 to about 1.0 php of a secondary phenylamine,
    - (ii) about 0.05 to about 2.0 php of a hindered phenol, and
    - (iii) a combination of about 0.05 to about 1.0 php of a secondary phenylamine and about 0.05 to about 2.0 php of a hindered phenol.

2. (Currently Amended) The additive of Claim 1 wherein said third component is a secondary phenylamine.

3-16. (Canceled)

17. (Currently Amended) The additive of Claim 1 wherein said third component is a hindered phenol.

18. (Currently Amended) The additive of claim 1, wherein said third component is a combination of a secondary phenylamine and a hindered phenol.

19. (Currently Amended) The additive of claim 1, wherein said additive comprises:

- (a) a polyol,
- (b) about 0.8 to about 2.0 php of a benzotriazole,
- [(b)] (c) about 0.1 to about 0.7 php of a lactone-based antioxidant having a 3-phenylbenzofuran-2-one structure,
- [(c)] (d) about 0.1 to about 0.5 php of a secondary phenylamine, and

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[(d)] (e) about 0.1 to about 1.5 php of a hindered phenol.

20. (Currently Amended) The additive of claim 19, wherein said additive comprises:

(a) a polyol,

(b) about 0.8 to about 2.0 php of a benzotriazole,

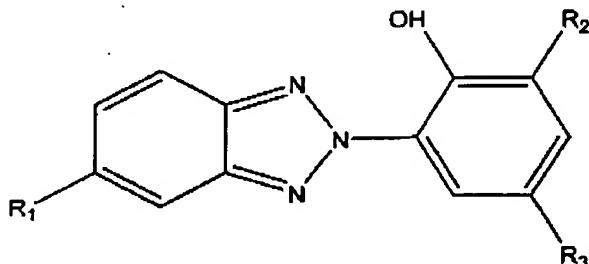
[(b)] (c) about 0.15 to about 0.3 php of a lactone-based antioxidant having a 3-phenylbenzofuran-2-one structure,

[(c)] (d) about 0.1 to about 0.5 php of a secondary phenylamine, and

[(d)] (e) about 0.25 to about 0.65 php of a hindered phenol.

21. (Previously Presented) The additive of claim 1 wherein said benzotriazole conforms to the structure of Formula (I)

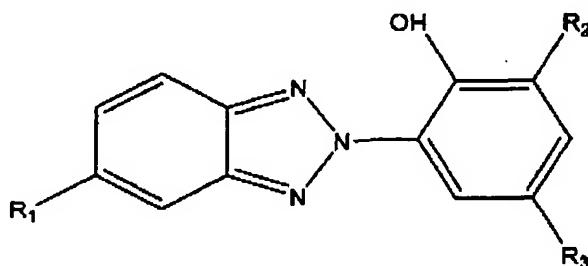
(I)



wherein R<sub>1</sub>, R<sub>2</sub>, and R<sub>3</sub> are individually selected from the group consisting of hydrogen, groups conforming to the formula C<sub>x</sub>H<sub>y</sub>O<sub>z</sub>, where x, y, and z are from 0 to 30, and halogens.

22. (Previously Presented) The additive of claim 19 wherein said benzotriazole conforms to the structure of Formula (I)

(I)

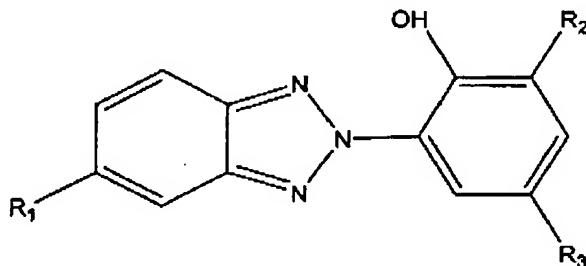


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wherein R<sub>1</sub>, R<sub>2</sub>, and R<sub>3</sub> are individually selected from the group consisting of hydrogen, groups conforming to the formula C<sub>x</sub>H<sub>y</sub>O<sub>z</sub>, where x, y, and z are from 0 to 30, and halogens.

23. (Previously Presented) The additive of claim 20 wherein said benzotriazole conforms to the structure of Formula (I)

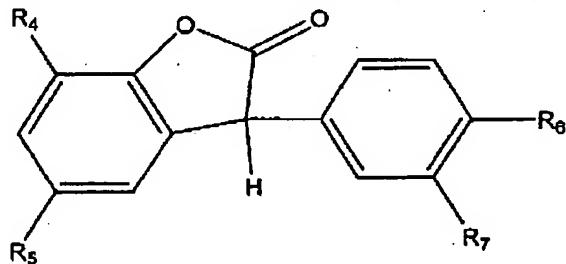
(I)



wherein R<sub>1</sub>, R<sub>2</sub>, and R<sub>3</sub> are individually selected from the group consisting of hydrogen, groups conforming to the formula C<sub>x</sub>H<sub>y</sub>O<sub>z</sub>, where x, y, and z are from 0 to 30, and halogens.

24. (Previously Presented) The additive of claim 1 wherein said lactone-based antioxidant conforms to the structure of Formula (II)

(II)

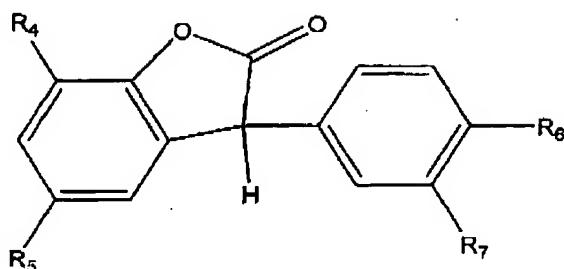


wherein R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> are individually selected from the group consisting of hydrogen and C<sub>1-30</sub> alkyl groups.

25. (Previously Presented) The additive of claim 19 wherein said lactone-based antioxidant conforms to the structure of Formula (II)

(II)

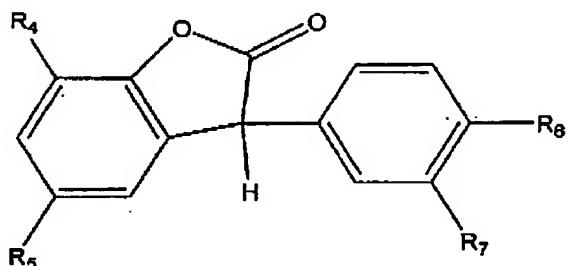
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wherein R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> are individually selected from the group consisting of hydrogen and C<sub>1-30</sub> alkyl groups.

26. (Previously Presented) The additive of claim 20 wherein said lactone-based antioxidant conforms to the structure of Formula (II)

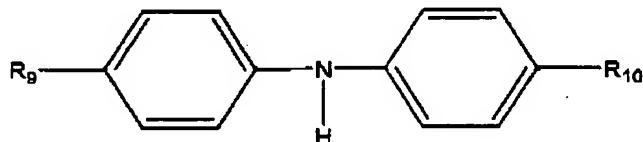
(II)



wherein R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> are individually selected from the group consisting of hydrogen and C<sub>1-30</sub> alkyl groups.

27. (Previously Presented) The additive of claim 1 wherein the secondary phenylamine conforms to the structure of Formula (IV)

(IV)

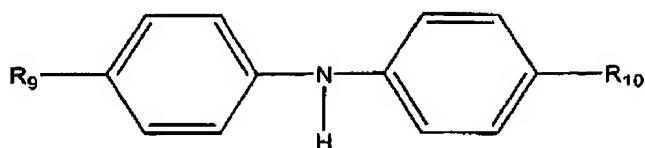


wherein R<sub>9</sub> and R<sub>10</sub> are individually selected from the group consisting of hydrogen, groups conforming to the formula C<sub>x</sub>H<sub>y</sub>O<sub>z</sub>, where x, y, and z are from 0 to 30, and halogens.

28. (Previously Presented) The additive of claim 19 wherein the secondary phenylamine conforms to the structure of Formula (IV)

(IV)

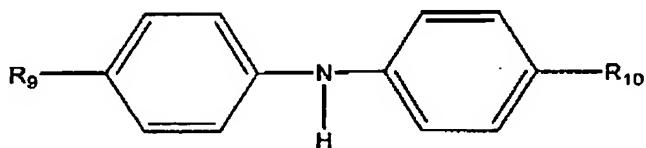
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wherein R<sub>9</sub> and R<sub>10</sub> are individually selected from the group consisting of hydrogen, groups conforming to the formula C<sub>x</sub>H<sub>y</sub>O<sub>z</sub>, where x, y, and z are from 0 to 30, and halogens.

29. (Previously Presented) The additive of claim 20 wherein the secondary phenylamine conforms to the structure of Formula (IV)

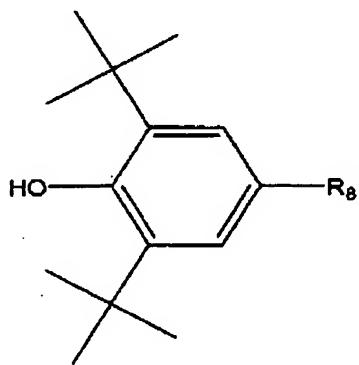
(IV)



wherein R<sub>9</sub> and R<sub>10</sub> are individually selected from the group consisting of hydrogen, groups conforming to the formula C<sub>x</sub>H<sub>y</sub>O<sub>z</sub>, where x, y, and z are from 0 to 30, and halogens.

30. (Previously Presented) The additive of claim 1 wherein the hindered phenol conforms to the structure of Formula (III)

(III)

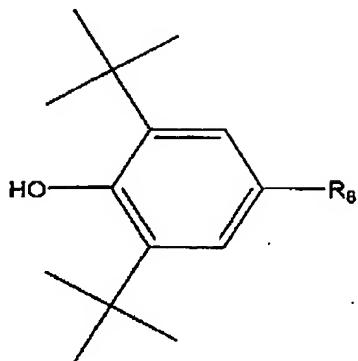


wherein R<sub>8</sub> is selected from the group consisting of hydrogen, groups conforming to the formula C<sub>x</sub>H<sub>y</sub>O<sub>z</sub>, where x, y, and z are from 0 to 30, and halogens.

31. (Previously Presented) The additive of claim 19 wherein the hindered phenol conforms to the structure of Formula (III)

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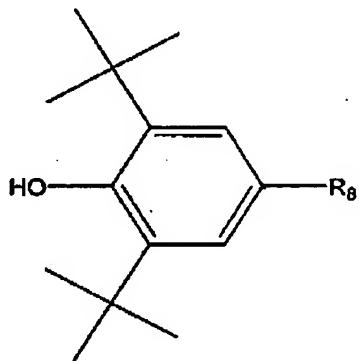
(III)



wherein R<sub>8</sub> is selected from the group consisting of hydrogen, groups conforming to the formula C<sub>x</sub>H<sub>y</sub>O<sub>z</sub>, where x, y, and z are from 0 to 30, and halogens.

32. (Previously Presented) The additive of claim 20 wherein the hindered phenol conforms to the structure of Formula (III)

(III)



wherein R<sub>8</sub> is selected from the group consisting of hydrogen, groups conforming to the formula C<sub>x</sub>H<sub>y</sub>O<sub>z</sub>, where x, y, and z are from 0 to 30, and halogens.

33. (New) A composition comprising:

- (a) a polyol,
- (b) a benzotriazole,
- (c) a lactone-based antioxidant having a 3-phenylbenzofuran-2-one structure, and
- (d) a fourth component selected from the group consisting of secondary phenylamines, hindered phenols, and combinations thereof.

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34. (New) The composition of claim 33, wherein the composition comprises:

- (a) the polyol,
- (b) the benzotriazole in an amount of about 0.5 to about 6.0 parts per hundred parts of the polyol (php),
- (c) the lactone-based antioxidant in an amount of about 0.05 to about 1.0 php, and
- (d) a fourth component selected from the group consisting of:
  - (i) about 0.05 to about 1.0 php of a secondary phenylamine,
  - (ii) about 0.05 to about 2.0 php of a hindered phenol, and
  - (iii) a combination of about 0.05 to about 1.0 php of a secondary phenylamine and about 0.05 to about 2.0 php of a hindered phenol.